

Industry Sector Trends for the Priority Chemicals

In 2003, a PC quantity was reported by facilities in over 320 different SIC codes. Exhibit 3.19 presents the PC quantities (from 1999-2003) for facilities in those 24 industry sectors (SICs) that accounted for 90 percent of the total quantity of PCs in 2003. Facilities in 5 industry sectors accounted for over 50 percent of the total quantity of the PCs in 2003 – SIC 3341- Secondary non-ferrous metals (16.3%), SIC 2869- Industrial organic chemicals nec (10.7%), SIC 3312-Blast furnaces and steel mills (10 %), SIC 2812- Alkalies and chlorine (9.4%), and SIC 2895- Carbon Black (95.1%).

Exhibit 3.19. Quantity (lbs) of Priority Chemicals in the Industry Sectors (SICs) that accounted for 90 Percent of the total Priority Chemical Quantity in 2003

SIC Code	SIC Description	1999	2000	2001	2002	2003	Percent of Total Quantity in 2003	Change in Quantity 1999-2003	Percent Change in Quantity (1999-2003)	Number of Reporting Facilities for this SIC (2003)
3341	Secondary nonferrous metals	7,476,809	10,527,825	9,720,459	11,993,360	12,933,583	16.3%	5,456,774	73.0%	90
2869	Industrial organic chemicals, nec	2,491,268	3,476,162	2,161,860	6,768,248	8,466,025	10.7%	5,974,757	239.8%	112
3312	Blast furnaces and steel mills	9,082,485	9,603,363	7,940,587	7,010,168	7,901,057	10.0%	-1,181,428	-13.0%	97
2812	Alkalies and chlorine	18,732,394	23,417,510	18,975,349	12,511,312	7,456,586	9.4%	-11,275,808	-60.2%	19
2895	Carbon black	0	3,749,053	3,454,362	3,922,074	4,052,612	5.1%	4,052,612	NA	19
2819	Industrial inorganic chemicals, nec	3,677,861	5,955,886	3,435,952	2,887,421	3,426,548	4.3%	-251,313	-6.8%	99
2911	Petroleum refining	4,711,108	6,175,607	2,234,706	4,199,005	3,405,412	4.3%	-1,305,696	-27.7%	130
3624	Carbon and graphite products	5,067,118	8,300,424	5,119,620	1,834,267	2,891,018	3.6%	-2,176,100	-42.9%	21
3334	Primary aluminum	2,328,131	3,470,641	2,197,738	1,849,099	2,845,041	3.6%	516,910	22.2%	17
9711	National security	71,606	163,504	2,228,042	2,605,080	2,787,601	3.5%	2,715,995	3793.0%	134
3479	Metal coating and allied services	1,468,003	1,819,255	1,648,889	2,461,943	2,712,495	3.4%	1,244,492	84.8%	103
3321	Gray and ductile iron foundries	1,101,863	1,108,568	2,682,182	2,980,670	2,547,436	3.2%	1,445,573	131.2%	142
2865	Cyclic crudes and intermediates	2,645,340	1,990,790	1,432,105	3,103,126	1,639,150	2.1%	-1,006,190	-38.0%	33
2821	Plastics materials and resins	942,386	836,036	565,677	746,511	1,387,892	1.8%	445,506	47.3%	71
9511	Air, water, and solid waste management	92,065	375,078	652,869	615,034	1,273,657	1.6%	1,181,592	1283.4%	5
3229	Pressed and blown glass, nec	1,984,537	1,730,917	1,545,626	1,299,721	1,171,476	1.5%	-813,061	-41.0%	36
2879	Pesticides and agricultural chemicals, nec	647,551	1,608,582	2,112,046	758,430	929,347	1.2%	281,796	43.5%	27
2491	Wood preserving	177,443	330,966	623,516	456,129	597,763	0.8%	420,320	236.9%	63
3691	Storage batteries	1,037,024	788,534	291,592	338,077	557,907	0.7%	-479,118	-46.2%	58
3315	Steel wire and related products	1,531,147	955,199	795,911	421,571	502,771	0.6%	-1,028,376	-67.2%	38
3357	Nonferrous wire drawing and insulating	1,271,536	520,149	509,831	351,195	486,727	0.6%	-784,809	-61.7%	85
2992	Lubricating oils and greases	320	356,966	340,985	434,100	459,677	0.6%	459,357	143549.1%	9
8733	Noncommercial research organizations	100,105	153	203,452	153,948	426,650	0.5%	326,545	326.2%	8
2037	Frozen fruits and vegetables	0	0	376,146	420,737	415,447	0.5%	415,447	NA	1

Exhibits 3.20 and 3.21 compares the management methods employed for PCs in 1999 and 2003 – by facilities in the industry sectors that accounted for 90 percent of the total quantity of PCs in 2003. Please note that facilities in two industry sectors SIC 2895 – Carbon Black and SIC 2037- Frozen Fruits and Vegetables that were included in the 2003 group of top industry sectors did not report any quantity of PCs to TRI in 1999. The 2003 quantities for facilities in SIC 2895 can be attributed to the reduced TRI reporting threshold for mercury and mercury compounds that became effective in 2000 and the reporting of benzo(g,h,i)perylene that was required to be reported to TRI beginning in 2000. There were no quantities of PCs reported by facilities in SIC 2037 in either 1999 or 2000. However, in 2001, one facility in this industry sector, located in Maine, began reporting quantities of naphthalene and PACs. Several observations from this Exhibit include:

Disposal

- Facilities in 2 of the ten industry sectors with a decreased disposal quantity reported decreases of at least 1 million pounds: SIC 3334 – Primary Aluminum (-1.6 million pounds) and SIC 3312 – Blast Furnaces and Steel Mills (-1.0 million pounds).
- Facilities in 13 of the 24 industry sectors reported an overall increase of more than 6.4 million pounds of PCs. Facilities in 4 of these industry sectors accounted for most of this increase: SIC 3341- Secondary Nonferrous Metals (+5.6 million pounds), SIC 9711 – National Security (+2.6 million pounds), SIC 3321 – Gray and Ductile Iron Foundries (+1.5 million pounds), and SIC 2819 – Industrial Inorganic Chemicals, nec (+1.1 million pounds).

Treatment

- Facilities in 12 of these industry sectors reported an overall decrease of about 2.8 million pounds of PCs going to treatment, mostly offsite. Facilities in 3 industry sectors accounted for the majority of this decrease: SIC 2812 – Alkalies and Chlorine (- 9.9 million pounds), SIC 2819 – Industrial Inorganic Chemicals, nec (- 2.2 million pounds), and SIC 2911 – Petroleum Refining (- 1.5 million pounds).
- Facilities in 11 of the industry sectors reported an increase in treatment. Large increases were reported by facilities in SIC 2869 – Industrial Organic Chemicals (+6.1 million pounds), SIC 3334 – Primary Aluminum (+2.1 million pounds), and SIC 3479 – Metal Coating and Allied Services (+1.4 million pounds).

Energy Recovery

- Facilities in 8 of the industry sectors reported a decreased quantity of PCs going to energy recovery. Most of the decrease was reported by facilities in 2 of these industry sectors SIC 3624 – Carbon and Graphite Products (- 2.4 million pounds) and SIC 2812- Alkalies and Chlorine (- 1.3 million pounds).
- Overall, facilities in this group of 24 industry sectors reported an increase of nearly 1 million pounds of PCs going to energy recovery. Facilities in 2 of the industry sectors: SIC 2895 – Carbon Black (+3.4 million pounds) and SIC 2819 – Industrial Inorganic Chemicals, nec (906,000 pounds) accounted for most of this increase.

Recycling

- Recycling decreased by over 200 million pounds for facilities in 13 of these industry sectors. Facilities in 3 of these sectors accounted for most of the decrease: SIC 3341 – Secondary Nonferrous Metals (- 99.5 million pounds), SIC 3691 – Storage Batteries (- 59 million pounds), and SIC 3229 – Pressed and Blown Glass, nec (- 46 million pounds).
- Facilities in 2 of the industry sectors reported a large increase in recycling of the PCs: SIC 2869 – Industrial Organic Chemicals, nec (+10.9 million pounds) and SIC 3312 – Blast Furnaces and Steel Mills (+2.1 million pounds).

**Exhibit 3.20. Comparison of Management Methods in 1999 for Priority Chemicals by Industry Sectors
with 90% of Total Quantity in 2003**

SIC Code	SIC Description	Onsite Disposal	Offsite Disposal	Total Disposal	Onsite Energy Recovery	Offsite Energy Recovery	Total Energy Recovery	Onsite Treatment	Offsite Treatment	Total Treatment	Total Quantity of Priority Chemicals	Percent of Total Quantity of Priority Chemicals (1999)	Onsite Recycling	Offsite Recycling	Total Recycling
3341	Secondary nonferrous metals	1,592,281	5,704,811	7,296,892	42,738	363	43,101	4,248	132,568	136,816	7,476,809	9.70%	360,456,162	11,170,170	371,626,332
2869	Industrial organic chemicals, nec	55,405	107,440	162,845	257,766	853,370	1,111,136	1,080,402	136,885	1,217,287	2,491,268	3.20%	2,190,509	326,403	2,516,912
3312	Blast furnaces and steel mills	834,074	8,000,933	8,835,007	24,137	0	24,137	28,173	195,168	223,341	9,082,495	11.80%	1,995,932	8,592,752	10,588,584
2812	Alkalies and chlorine	1,238	6,206	7,444	1,941,250	0	1,941,250	16,646,090	137,611	16,783,700	18,732,394	24.20%	2,573,025	18,184	2,591,209
2895	Carbon black	0	0	0	0	0	0	0	0	0	0	0.00%	0	0	0
2819	Industrial inorganic chemicals, nec	539,944	809,953	1,349,797	109,966	4	109,970	444,542	1,773,552	2,218,094	3,677,861	4.80%	80,701	1,506,561	1,587,262
2911	Petroleum refining	49,077	185,543	234,619	3,613	25,668	29,281	4,269,808	177,400	4,447,208	4,711,108	6.10%	11,406,318	2,000	11,408,318
3624	Carbon and graphite products	6,172	9,977	16,149	3,689,957	12,650	3,702,607	1,344,510	3,852	1,348,362	5,067,118	6.60%	285,065	25,892	310,757
3334	Primary aluminum	13,531	1,768,059	1,781,590	210,000	160	210,160	330,175	6,205	336,381	2,328,131	3.00%	463,968	6,500	470,468
9711	National security	25,217	46,059	71,276	275	0	275	0	55	55	71,606	0.10%	0	139,325	139,325
3479	Metal coating and allied services	0	6,741	6,741	644,216	106,092	750,308	683,074	27,880	710,954	1,468,003	1.90%	3,578	276,894	280,472
3321	Gray and ductile iron foundries	549,504	540,929	1,090,433	0	0	0	1,498	9,932	11,430	1,101,863	1.40%	0	42,470	42,470
2865	Cyclic crudes and intermediates	144,465	872,341	1,016,806	261,090	565,688	826,778	170,395	631,361	801,756	2,645,340	3.40%	1,334,851	149,341	1,484,192
2821	Plastics materials and resins	469	8,100	8,569	514,805	326,594	841,399	56,056	36,362	92,418	942,386	1.20%	329	1,695	2,024
9511	Air, water, and solid waste management	0	0	0	0	92,065	92,065	0	0	0	92,065	0.10%	0	0	0
3229	Pressed and blown glass, nec	2,942	1,919,289	1,922,231	0	0	0	0	62,306	62,306	1,984,537	2.60%	101,021,030	1,017,491	102,038,521
2879	Pesticides and agricultural chemicals, nec	7,110	73,160	80,270	10	255,750	255,760	167,311	144,210	311,521	647,551	0.80%	306,031	232	306,263
2491	Wood preserving	227	15,388	15,615	39,000	2,907	41,907	1,345	118,576	119,921	177,443	0.20%	18,610	4,773	23,383
3691	Storage batteries	618	1,018,309	1,018,927	0	0	0	373	17,725	18,098	1,037,024	1.30%	78,562,675	211,576,515	290,139,190
3315	Steel wire and related products	0	1,192,832	1,192,832	0	0	0	15,641	322,674	338,315	1,531,147	2.00%	0	3,161,698	3,161,698
3357	Nonferrous wire drawing and insulating	0	1,113,371	1,113,371	29,936	1,627	31,563	33,039	93,563	126,602	1,271,536	1.60%	244,133	1,700,644	1,944,777
2992	Lubricating oils and greases	0	320	320	0	0	0	0	0	0	320	0.00%	0	0	0
8733	Noncommercial research organizations	6,600	93,468	100,068	0	0	0	3	34	37	100,105	0.10%	0	91,000	91,000
2037	Frozen fruits and vegetables	0	0	0	0	0	0	0	0	0	0	0.00%	0	0	0
	Total	3,826,773	23,493,029	27,321,802	7,768,749	2,242,948	10,011,696	25,276,682	4,027,919	29,304,602	66,638,100	86.30%	560,942,817	239,810,340	800,753,157

**Exhibit 3.21. Comparison of Management Methods in 2003 for Priority Chemicals by Industry Sectors
with 90% of Total Quantity in 2003**

SIC Code	SIC Description	Onsite Disposal	Offsite Disposal	Total Disposal	Onsite Energy Recovery	Offsite Energy Recovery	Total Energy Recovery	Onsite Treatment	Offsite Treatment	Total Treatment	Total Quantity	Percent of Total Quantity of Priority Chemicals (2003)	Onsite Recycling	Offsite Recycling	Total Recycling
3341	Secondary nonferrous metals	2,139,426	10,761,526	12,900,951	29,256	1,519	30,775	3	1,854	1,857	12,933,583	16.30%	257,271,267	14,817,932	272,089,199
2899	Industrial organic chemicals, nec	10,650	94,920	105,570	252,084	758,823	1,010,907	7,052,605	296,943	7,349,548	8,468,025	10.70%	1,039,536	12,364,819	13,404,354
3312	Blast furnaces and steel mills	182,312	7,638,324	7,820,635	25,348	0	25,348	10,287	44,777	55,074	7,901,057	10.00%	920,211	11,803,209	12,723,420
2812	Alkalies and chlorine	1,631	5,913	7,544	612,719	13	612,732	6,812,846	23,484	6,836,310	7,456,586	9.40%	2,809,628	16,585	2,826,213
2895	Carbon black	742	1,825	2,566	3,431,938	0	3,431,938	617,929	178	618,107	4,052,612	5.10%	0	0	0
2819	Industrial inorganic chemicals, nec	1,337,887	1,069,078	2,406,966	1,015,466	972	1,016,438	2,266	878	3,144	3,426,548	4.30%	256,659	916,631	1,173,290
2911	Petroleum refining	20,892	213,254	234,146	166,455	105,150	271,605	2,857,513	42,148	2,899,661	3,405,412	4.30%	4,738,695	27,874	4,766,570
3624	Carbon and graphite products	41,241	22,219	63,460	1,342,616	1,729	1,344,345	1,478,243	4,970	1,483,213	2,891,018	3.60%	291,078	36,828	327,906
3334	Primary aluminum	74,805	61,394	135,999	265,542	18,216	283,758	2,423,105	2,178	2,425,284	2,845,041	3.60%	158,826	31,704	190,530
9711	National security	2,528,146	116,254	2,644,399	2,204	4,151	6,355	134,372	2,475	136,847	2,787,801	3.50%	467,477	444,277	911,754
3479	Metal coating and allied services	195	66,874	67,069	489,646	73,162	562,807	2,075,615	7,003	2,082,619	2,712,485	3.40%	7,353	194,866	202,219
3321	Gray and ductile iron foundries	812,982	1,730,973	2,543,955	0	0	0	3,445	36	3,481	2,547,436	3.20%	32,212	237,203	269,415
2865	Cyclic crudes and intermediates	132,825	554,414	687,239	204,791	291,683	496,474	124,867	330,570	455,436	1,639,150	2.10%	849,092	0	849,092
2821	Plastics materials and resins	5,686	26,166	31,862	267,785	244,918	512,712	811,931	31,386	843,317	1,387,892	1.80%	432,221	53,533	485,754
9511	Air, water, and solid waste management	643,991	79,788	723,779	0	172,916	172,916	6,390	370,573	376,963	1,273,657	1.60%	0	0	0
3229	Pressed and blown glass, nec	1	1,171,076	1,171,078	0	398	398	0	0	0	1,171,476	1.50%	55,181,195	404,726	55,585,921
2879	Pesticides and agricultural chemicals, nec	4,788	13,031	17,819	281,641	228,547	510,188	285,668	115,672	401,339	929,347	1.20%	10,094	6,333	16,427
2491	Wood preserving	254	217,392	217,647	261,305	31,154	292,459	7,923	79,795	87,658	597,763	0.80%	18,892	2	18,894
3691	Storage batteries	46,231	511,672	557,903	0	0	0	0	4	4	557,907	0.70%	87,215,576	143,907,296	231,122,872
3315	Steel wire and related products	322	502,449	502,771	0	0	0	0	0	0	502,771	0.60%	1,000	2,058,361	2,059,361
3357	Nonferrous wire drawing and insulating	19	474,939	474,957	0	980	980	10,760	30	10,790	486,727	0.60%	237,833	761,836	999,669
2992	Lubricating oils and greases	0	15,019	15,019	0	0	0	444,658	0	444,658	459,677	0.60%	1,358	397	1,755
8733	Noncommercial research organizations	13,665	412,837	426,402	0	158	158	2	87	89	426,650	0.50%	0	27,611	27,611
2037	Frozen fruits and vegetables	0	0	0	415,447	0	415,447	0	0	0	415,447	0.50%	0	0	0
	Total	7,988,400	25,761,337	33,759,737	9,064,253	1,934,489	10,998,742	25,160,439	1,354,960	26,515,399	71,273,979	90.00%	411,940,193	188,112,022	600,052,215